



LITERATURE REVIEW

Gender equality and Climate Compatible Development

Drivers and challenges to people's
empowerment

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About this review

The Climate and Development Knowledge Network (CDKN) assists developing countries to design and deliver climate compatible development. This document reviews literature to provide a background for the CDKN research project [Gender equality and Climate Compatible Development- Drivers and challenges to people's empowerment](#). It analyses how and where gender mainstreaming is carried out in climate change adaptation, mitigation and development projects, and identifies the knowledge gaps in these fields with the goal of informing the subsequent research.

About this project

This project addresses major knowledge gaps in relation to the gender dimension of climate change mitigation, adaptation, and development, including:

- Limited compelling evidence on the extent to which a gender-sensitive approach to climate compatible development (CCD) contributes to greater gender equality.
- Limited evidence on the potential gains of a gender-sensitive approach, and the losses associated with gender-blind approaches.
- Major knowledge gaps on the gender dimension of climate change mitigation, particularly in the areas of green growth, transport and urban infrastructure.
- Limited nuanced analysis of gender and climate change that is translated into usable insights for policy and practice.

CDKN aims to strengthen the evidence base for gender-sensitive approaches across these fields by answering the following questions:

1. What is the evidence of the relevance of gender-sensitive programming in CCD to promote and achieve people's empowerment?
2. What socio-economic, political and cultural factors constrain or favour gender-sensitive approaches in the context of CCD?
3. Does a gender sensitive approach enable better CCD outcomes and if so, in what way?

This research will demonstrate the extent to which gender sensitivity in climate change and development projects and programming can increase gender equality, paving the way for more effective climate compatible development and contributing to our goal of helping people to empower themselves.

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This paper was completed by valuable contributions of Virginie Le Masson, Beatrice Mosello, Anna Hickman and Sebastian Kratzer. Photo copyright @ Virginie Le Masson.

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1. Introduction: Revisiting Gender

This document reviews literature to provide a background for the CDKN research project [Gender equality and Climate Compatible Development- Drivers and challenges to people's empowerment](#). The project addresses major knowledge gaps in relation to the gender dimension of climate change mitigation, adaptation, and development. Its aim is to strengthen the evidence base of gender-sensitive approaches to climate compatible development¹ (CCD). The project will explore to what extent gender-sensitive approaches contribute to greater gender equality and more effective CCD. It will therefore help to create more nuanced gender analysis of CCD projects, provide compelling evidence of the benefits of gender-sensitive approaches to CCD and translate useable insights for policy and practice while supporting people's empowerment.

Although the relationship between gender, development and climate change is not a new subject, it is unclear how effective approaches to integrate gender into projects have been in generating greater gender equality. As a consequence, there is also limited evidence on the potential gains of a gender-sensitive approach, and the potential losses associated with a gender-blind approach. Additional knowledge gaps are found in looking at how aware climate change mitigation research and policy is of gender and what the potential impacts of a gender-blind approach are. Information on how gender and climate change mitigation relate is also an area requiring further knowledge and understanding, particularly in the areas of green growth, transport and urban infrastructure. Because vulnerability is differentiated across societies, including between men and women, there is clearly a need to carry out research to fill these knowledge gaps to support efforts in reducing vulnerability to climate change around the world.

This project focuses on urban areas in developing countries to identify: (1) evidence that gender-sensitive programming is able to promote and achieve people's empowerment in the context of CCD; (2) the socio-economic, political and cultural factors that constrain or favour gender-sensitive approaches in the context of CCD; and (3) whether a gender-sensitive approach enables better CCD outcomes, and if so, in what way? The work will include the development of progress indicators in relation to gender equality and people's empowerment², to the enabling environment (including socio-economic, geographical and cultural factors shaping the use and effectiveness of, and potential obstacles posed by, gender-sensitive approaches), and to improved CCD outcomes.

Three case studies will be selected to reflect on a number of past and current projects that address disaster risk management, energy, and water issues in relation to climate change adaptation and mitigation. The geographical scope will focus on urban contexts across the three CDKN regions (Africa, Asia and Latin America and the Caribbean). CDKN-funded projects will be given priority wherever possible in order to draw on established and trusted networks and partnerships. The main selection criteria will be related to past, current and future commitment of projects/policies to address gender perspectives in relation to CCD. This literature review informs these components of the project and thus seeks to:

¹ 'Climate compatible development' is development that minimises the harm caused by climate impacts, while maximising the many human development opportunities presented by a low emissions, more resilient, future (Mitchell and Maxwell, 2010).

² Drawing on, eg. ODI Social Development's publication 'Measuring women's empowerment and social transformation in the post-2015 agenda' (Harper et al., 2014).

- A. Identify the general trends in the literature on the link between gender, climate change and urban areas in developing countries;
- B. Identify the approaches that have been used to integrate gender into climate change projects ('mainstream'), and look at established approaches used in gender and development projects;
- C. Identify some apparent knowledge gaps;
- D. Finalise the study's research questions; and
- E. Identify possible case study locations for the research project.

This review has examined scholarly works as well as reports and other publications by non-, multi- and intra-governmental bodies and gender networks. Little was identified that covered our three categories simultaneously (gender, climate change and urban areas in developing countries). Toolkits used for bringing gender into climate change projects, or for developing climate change projects, were examined as well. Because it is difficult to assert whether the toolkits have been used (once, more than once, never?), it is also difficult to assess whether they are effective. Interviewing the authors of the toolkits does not guarantee any information about their use or effectiveness, because if they are freely available (eg. through the Internet), authors may be unaware of their actual application in the field.

In many ways, this review is about how and where gender mainstreaming is carried out in climate change and development projects³. Although mainstreaming has numerous critics (Walby, 2005; Meier and Celis, 2011), we have interpreted gender mainstreaming broadly to mean taking gender into account in project design, development, implementation and in monitoring and evaluation. Because of the limited amount of literature discussing experiences with mainstreaming gender into climate change projects, the review has also looked more broadly at mainstreaming gender into development projects. Mainstreaming is a concept also used for other perspectives or issues that is not traditionally included in development projects. In fact, when climate change was in its infancy as a policy objective, literature often spoke of mainstreaming climate change into development (Klein et al, 2005), and many continue to use this rhetoric (eg. UNDP-UNEP, 2011).

If gender has to be mainstreamed, one could argue that this implies that vulnerability (and/or poverty) is misunderstood. Tacoli et al. (2014) concur that 'integrating gender analysis in research and policy on environmental change' is at the core of the concept of resilience. Thus, not recognising the crucial role of socio-cultural dimensions – such as gender – from the outset suggests an interpretation of the context that is simplified for the purpose of studying or implementing projects. Alston notes that 'A systematic awareness of the social systems, power differentials, and inequitable resource allocation is necessary if we are to avoid assuming that adaptation is possible for all people in all circumstances with effort, funding, and careful planning' (2013b). It could be argued that not considering these social issues would defeat the entire purpose of a development and climate change project, since the underlying pressures that keep people vulnerable to climate change and natural hazards are ones that are deeply grounded in social and cultural practices, attitudes and traditions (see Cannon et al, 2014). Keeping this point in mind, this review nevertheless has included all types of projects, programmes, toolkits and studies, regardless of their epistemological starting points, recognising that dominant climate change knowledge is driven by narratives that do not necessarily consider socio-cultural dimensions (Shaheen Moosa and Tuana, 2014).

³ And to this end, less about the relationship between greenhouse gas emissions reductions and gender.

A further observation is that often statements about gender are not substantiated by empirical evidence. Although studies have been carried out, and authors of literature are respected academics or practitioners, there are a number of statements – assumptions – that are taken for truths, but do not appear to be based in data. Seema Arora-Jonsson (2011) identifies a number of such statements, and highlights the danger that they pose to overall understanding of gender issues in climate change and development, and by consequence, to programmes and projects that aim to integrate these three aspects. She notes that they were largely propagated to place gender more centrally on the policy and action agendas (Arora-Jonsson, 2011). This is also important to bear in mind, because it underscores the need for further empirical research, and to ask questions about the sort of information that inform both research and implementation projects on gender, climate change and development. While this research project focuses on the implementation and success of gender-sensitive programming, the widely-spread beliefs about gender and climate change may permeate projects and programming in a harmful way, thus potentially influencing design and outcomes.

The review emphasises adaptation to climate change over reduction of greenhouse gases, because the relationship between gender and vulnerability to climate change is so crucial. However, we have also included some of the key gender issues that appear in the more limited literature on mitigation and gender. Men and women have differentiated opportunities for engaging in mitigation activities, for benefitting from the activities, from accessing financing and may experience the interventions differently (Edmunds et al, 2013; WEDO, 2013).

This review begins with a background on gender and climate change, noting a few key messages about the literature and the research and policy domain. It continues to examine some of the approaches – interpreted widely to mean methodologies, conceptual frameworks, toolkits – used in gender projects. It then identifies some knowledge gaps relevant to the project, re-examines the proposed project research questions, and suggests some criteria for selecting case studies.

2. Background on gender and climate change

This section summarises key messages. As noted above, very little in the reviewed literature addresses gender, climate change and urban areas simultaneously in an informative way. This has consequences not only for this review, but also for the selection of case study countries, as noted in Section 6. As a result, this section covers messages found in the gender literature that relate to climate change, and that relate to gender and urban areas, with a focus on impacts and adaptation. Because the majority of literature on gender and climate change is based on evidence from rural areas, we felt it was necessary to look more closely at gender and urban/rural areas, to see what the potential implications could be for this study. While our review could only address this briefly, this potential difference has been raised as a suggested additional research question for the project (see Section 5). Issues related to mitigation and gender are discussed in this section, but are of a slightly different nature than issues that relate to adaptation and impacts. They are therefore discussed in a separate sub-section at the end of this section.

There are a number of ways in which gender and climate change intersect. The starting point for most reviews is often that existing, socially constructed gender differences and discrimination in society mean that climate change will affect men and women differently. Shaheen Moosa and Tuana (2014: 683) provide a lengthy list of references to support the claim that ‘the combination of women’s socially prescribed roles and social inequalities in terms of women’s access to basic social

goods can be linked to their increased physical vulnerability to extreme weather events'. More broadly, because women and men play different roles in the household and because they must follow different gendered roles, they are differently affected by climate. This can be illustrated by the way in which men are distressed to the point of suicide in India due to agricultural losses leading to an inability to repay loans⁴ (Kennedy and King, 2014) and the way in which women are more likely to die from floods because they have not learned to swim (Alam and Collins, 2010) and because they cannot leave their houses to escape the floods without being accompanied by a male relative (Bradshaw and Fordham, 2013). Another starting point for gender and climate change reviews is that climate change will exacerbate these differences and worsen discrimination because it makes people worse off in general (eg. UNDP, 2010). The argument from this starting point is that climate change is expected to erode progress in gender equality (AfDB et al, 2003). This is because climate change will upset livelihoods in such a way that the attached social norms and networks will be recast, and the expectation is that 'traditional' gender roles will resurface. The irony is of course that if women and men are differentially vulnerable because of their socially-constructed roles, and these roles will be exaggerated by climate change, the final outcome is a double-hit.⁵

A speculative observation regarding the literature with these two starting points is that the latter (stressing that progress on gender equality will erode) does suggest a view that comes from parties not wanting to point blame on anyone for the inequalities or suggest radical changes to the underlying social status quo. This may explain why this starting point is found in reports by multi-lateral institutions, whose business is to work with, rather than critique, existing governments, regardless of the type of regime. To suggest that socially constructed gender differences and discrimination exist would be tantamount to suggesting the need to remove these biases, which can be so inherently interwoven in socio-cultural fabric that it may be impossible for the people in such a society to imagine a world beyond discrimination.

Solutions to the pressure put on men and women by climate change include a greater focus on gender issues in assessing and reducing vulnerability to climate change. However, the literature reveals that this is more complex than simply ensuring that gender is part of a project plan. Indeed, by singling out women (which is most often the case), social dynamics in families and communities are changed (WHO, 2009). This means that **a broader vision based on social inclusion is necessary to successfully address gender issues in climate change projects.** *Has this been the case?* This is one of the unanswered questions that this project may help to answer.

Research on the social dimensions of vulnerability to climate change, which includes gender, is small in volume compared to research on impacts and climate science. Social scientists were brought into discussions on climate change knowledge much later than they actually began. But understanding social dynamics is crucial for being able to find appropriate solutions to climate change. It is not sufficient to acknowledge that there are differences between men and women, for example, but rather this must be explicitly addressed. This is nothing new to gender and development studies, but something that is brought out as 'new' by the nascent field of climate change and gender. When viewed from the perspective of climate change, these findings take on new meaning, because they require careful consideration of how the complexity introduced by understanding gender dynamics

⁴ This example is not actually evidence of farmers committing suicide as a result of climate change, although it is frequently used in this way, but because their crops failed for many different reasons, albeit including climate change (Kennedy and King, 2014). But it demonstrates what could happen if climate change is the main cause.

better would be included in projects aimed at reducing climate change impacts or greenhouse gas emissions. A study on gender and climate change in Mozambique revealed that women and men are affected differently by climate changes due to power structures and role differences (Ribeiro and Chaúque, 2010). The study showed that women can access but not control natural resources and other property rights. As well, women do most of the reproductive and part of the productive work, while men are only responsible for productive work. Research in Andhra Pradesh, India, had similar findings (Lambrou and Nelson, 2010). In agrarian settings, Carr and Thompson (2014) identify that dualistic approaches to gender might result in maladaptive interventions that overlook specific challenges that face significant portions of agrarian populations, and may enhance the vulnerable and marginalised. Intersectional gender analysis points to the need for a rigorous empirically grounded evidence that identifies the groups that are overlooked by binary gender analysis, and the need for methodological innovations that are currently limited across literature. *But how can a climate change project address these underlying issues? Is it even realistic for climate change projects to take on this responsibility?*

Bacchi and Eveline (2010) suggest that 'before we undertake a gender analysis of policies and outcomes, we should ask what is the problem being solved'. This requires asking why men and women are differentially vulnerable. Is it rooted in particular societal institutions or norms? Are these similar across countries? What role do cultural factors play, such as religion or beliefs about different roles of men and women with regard to family (reproduction), economy (production) and participation in decision-making (power)? To what extent is the cultural context the main driver of gender-differentiated vulnerability to climate change? What are other drivers of gender differentiated vulnerability to climate change?

It is also important to decouple the common assumption that vulnerability and poverty are inherently linked⁶, and similarly gender and poverty. Citing Jackson (1996), Arora-Jonsson (2011) makes it clear that poverty and gender are two distinct forms of disadvantage and that there may be more equality in poor households than in wealthier ones (based on studies in India). Some of these findings are not only counter-intuitive, but also contradict many of the assumptions about gender, poverty and climate change found in the mainstream climate change literature. It also suggests that gender and development expertise is a requirement for project design. To what extent are climate change projects that seek to integrate gender taking such expertise into account? What are the sources that are being drawn on to inform project design? And, crucially, to what extent are the recommendations from gender and development literature being considered?

Our argument for zooming in on gender issues in climate change research and projects, therefore, is not so much to bring equality – as this is not possible simply through individual projects or research, but requires transformation in culture and society – but to highlight that solutions for climate change will be different for different groups of people, including men and women. Gender is like any other socio-cultural dimension: often left out of climate change projects and policy because it has roots that are far deeper than climate change projects and policy can go (Schipper et al, 2014). But Arora-Jonsson (2011) and Alston (2013b) argue that unless the gender equality issue is tackled, policy and projects to address gender in climate change will not be effective.

⁶ Ironically, Chambers made this comment 25 years ago (1989), noting that poverty is not the same as vulnerability. Somehow, this has become unlearned over the years, most likely with the aim to simplify the picture in order to develop tidy development projects.

At what level should gender, climate change and development be addressed? Who is responsible for addressing it? Attitudes about gender, climate change and development in the policy discourse also matter for project development, since development projects are often funded by public money, meaning that they must be aligned with policy priorities. A range of literature indicates progress and challenges that have been met regarding programmes and projects that attempt to integrate gender into strategies. Gender is a latecomer to policy debates that relate to climate and environmental change. Whilst the understanding of differential impacts has increased, significant gaps still exist in relating impacts to gender, and the implications to policymakers (Tacoli et al., 2014). Using donor experiences, a study by Otzelberger (2011) indicates that whilst some progress has been made in integrating gender dimensions into climate change responses, there are still significant challenges that prevent gender integration in CCD. Otzelberger (2011) highlights that whilst finance and environment departments have begun to engage with or drive the gender and climate change agenda, many departments lack effective strategies for systematically integrating gender into adaptation and mitigation projects. Additionally, challenges are faced in transferring existing gender capacities and policies into climate change portfolios, such as weak staff capacities, resources and strategies for mainstreaming gender, or an absence of systematic procedures to integrate gender from donor commitments (Otzelberger, 2011) leaving weak integration. Yet, fully integrating a gender-responsive approach into climate change programmes and policies is essential.

Further, some of the new projects and knowledge projects that have been developed with a gender-orientated approach are failing to address gender inequalities by focusing too narrowly on vulnerabilities to climate change (Otzelberger, 2011). In response, some projects are beginning to look beyond the concept of vulnerability, highlighting the specific knowledge and capacities that men and women contribute to climate change adaptation and low-carbon development processes. More research and understanding needs to be generated in areas where gendered impact pathways are not immediately obvious, particularly transport, infrastructure, energy access, housing, formal and informal employment (ibid. 2011). In terms of project management, gender analysis at the beginning of project cycles, in many cases, needs to be strengthened, moving beyond superficial understanding and/or being strong “on paper”. Additionally, the disconnect needs to be addressed between gender analysis at the beginning of the cycle, i.e. at the design and appraisal stage, and a weaker integration of gender in the implementation, monitoring and appraisal stages. Part of the problem arises from the failure to properly analyse and integrate gender during the design phase.

a. Gender, Climate Change and Urban Areas

A review of literature on gender and urban areas indicates that there are disparities between urban and rural gender roles, and the gap in the exploration of urban; the literature does not tap into the heterogeneous nature of urban gender groups. The lack of literature available on this topic suggests a need for considerable research.

Because the literature on gender, climate change and urban areas is limited, it introduces some concerns, most importantly about the existing knowledge on gender and climate change, which has been mainly learned from studying rural contexts. There are differences in what men and women do in rural and urban areas, and this will influence the way in which climate change will affect each of them. A starting point is simply understanding what the differences are between men and women in rural areas and men and women in urban areas. In rural, developing areas,

agriculture – one of the most climate change sensitive employment sectors – dominates people’s livelihoods. In urban areas, many people have salaried jobs that are not as sensitive to climate change. However, being disconnected from agriculture also has its pitfalls: Scott (2014) notes issues such as how the poor in urban areas are more prone to food insecurity, since they are not producing their own food like those in rural areas. There is also an informal sector that is particularly relevant in urban areas, especially among the poorest, who tend to live in precarious areas such as slums⁷. Informal work such as street vendors, construction workers, and waste pickers are rarely acknowledged in relation to climate change and gender equality (see for instance Dias, 2014).

As noted, people in rural areas are often sensitive to climate change because of their relationship with climate change vulnerable natural resources, but other types of important threats exist, such as flash floods and heat waves, which are often the types of hazards experienced by urban people. In Ahmedabad, India, for example, study revealed that the mortality rate of women was higher than that of men during the heat wave that struck Gujarat in 2010 (Azar et al., 2014). Other climate-related issues, such as increases in vector-borne diseases like Dengue, which are common in urban areas, may also affect men and women differently because they may be in different places at different times of day (Dengue mosquitos are active during day, particularly in the morning and the afternoon).

Women are also less employed, as is shown in Asian cities (Siddique and Chanchai, 2012), and Scott (2014) notes that women participate far less in the labour force in low- and middle-income countries. However, women are more likely than men to be employed informally and tend to have less well-paid and more insecure jobs (Chant, 2013). Tacoli et al (2014) highlight the importance of asymmetrical power relations between men and women in the home, and power disparities between the formal and informal. The growing formal and informal divide may also have the potential to widen the gap between men and women due to their roles within society in urban systems. For example, the feminisation of informal waste disposal, which in India translates to about 80% of waste pickers being women (Dias, 2014). Scott (2014) also points to how limited power translates into lower nutritional levels for girls and women for women-headed households. Furthermore, less power and less economic ‘muscle’ mean less influence over policy and decision-making processes, particularly around disaster risk reduction. Scott (2014) stresses that solutions need to recognise the differences between men and women in cities, suggesting that urban design and services (water, sanitation, transport and markets) need to ‘address gender discrimination and promote equal opportunities and participation’.

b. Gender and Mitigation of Greenhouse Gas Emissions

The discussion about mitigation and gender is less visible than the discussion on impacts and adaptation and gender. So far, we have explained that the discrepancy between the way men and women are affected by and can respond to climate change impacts is rooted in the social construction of gender roles. What is less intuitive, and less studied, is the way in which these gender roles also influence the experiences of actions to mitigation greenhouse gas emissions, as well as access to financing for mitigation activities (WEDO, 2013). Another way in which gender matters for greenhouse gas emissions is that since women tend to be marginalised from decision-making as climate policy is mostly driven by decisions by men (Röhr,

⁷ Although research has shown that slums can also house some of the most creative and adaptive people meaning that one cannot generalise about who is the most vulnerable to climate change.

2009; Buckingham, 2010; Edmunds et al, 2013). Women are seen primarily as victims, rather than as actors in the task to find solutions to the climate change problem (WEDO, 2013).

One area that has received some attention is agriculture, where both adaptation and mitigation options exist, and which is the source of livelihoods for a significant portion of poor people worldwide, predominantly those in rural areas (eg. Edmunds et al, 2013). Agriculture is one of the main sources of greenhouse gas emissions, especially methane and nitrous oxide, and can be a large source of carbon dioxide emissions through change in land use, if deforestation is required for expansion of agricultural space. Edmunds et al (2013) call for more research on low-emissions solutions in agriculture targeted especially at women.

Mitigation of greenhouse gas emissions is seen as less of a social issue and more of a technical issue, which is why questions of gender and social inclusion and empowerment in general are not as central to the debate as in adaptation discussions. Exceptions to this include discussions about access to mitigation schemes such as the Kyoto Protocol's Clean Development Mechanism, where equity issues are central to the debate of the instrument's effectiveness (eg. Boyd et al, 2009). Other important social dimensions of mitigation include people's acceptance of low-carbon solutions, including technology (WEDO, 2013). As noted by Röhr (2009), men are the dominant actors in the sectors where mitigation is taking place, meaning that women's perceptions and acceptance of and access to these solutions is not prioritised, making women even more marginalised from those sectors.

The case has been made for gender to be included in all dimensions of climate change policy, including responsibility for emissions and mitigation of them (Lambrou and Pianna, 2006) yet with the limited literature, there is a clear need for further research on many of these dimensions.

3. Approaches to integrating gender into development and climate change projects

This section highlights some examples of how toolkits, programmes and projects integrate gender. Recognition of the need to integrate gender-sensitive strategies, such as conducting gender analyses and gender mainstreaming within development and climate change projects has increased over past decades. This progress draws on more than four decades of work in addressing the different needs of women and men in development projects.

The Women in Development (WID) approach emerged in the 1970's with the aim to integrate gender, and particularly women's issues into development. The dominant strand of the WID approach used efficiency-based arguments to encourage donor agencies to address and invest in women's issues. This however, emphasised what women could contribute to development and economic growth but overshadowed women's demands from development for gender equity, the latter becoming conditional upon showing positive growth synergies (Razavi and Miller, 1995). The framework treated women as a separate group for policy responses and interventions, which raised concerns that women's needs were merely added on as opposed to being mainstreamed within development efforts (UNDP, 2001). Following this, the Women and Development (WAD) approach aimed to remove women from patriarchal hegemonies and cultures through creating women-only

development projects. However, criticisms emerged highlighting that the WAD approach failed to 'undertake a full-scale analysis of the relationship between patriarchy, differing modes of production, and women's subordination and oppression (Rathgeber in Zwart, 1992). Furthermore, it is argued that the WAD is largely a more refined and critical version of the WID, and as such, the differences between the WID and the WAD are limited, particularly as most were academic variances (Zwart, 1992).

As a consequence, the Gender and Development Approach (GAD) emerged to better address the long-term interests and different contexts of women and men, to challenge structures that had maintained their marginalisation and therefore to address differential power relations between women and men. The GAD aims to shift focus onto socially determined relations between men and women and enables participation on an equal basis. This approach recognises the social, economic, political and cultural forces that determine how men and women participate in, benefit from, and control project resources and activities differently, with projects having a particular focus on women (World Bank, 2005).

With this perspective, gender equality is recognised as both a condition for sound development and as a development goal in itself (Otzelberger, 2011). The World Bank notes that institutions are approaching gender equality with an increasingly comprehensive approach to analysis and design on development interventions that consider the situation and needs of both women and men (World Bank, 2005). They also increasingly stress that successful climate change adaptation and disaster risk reduction (DRR) requires a gender-sensitive approach to adaptation and risk management that facilitates the equal participation of men and women (Laddey et al., 2009; UNDP, 2011).

Whilst gender considerations are being increasingly integrated into climate change projects, particularly with the increasingly wider adoption of the GAD approach, evaluations and reports indicate that there is no set methodology for designing and implementing gender-sensitive projects. However, various methods and tools for integrating gender into projects have developed. Box 1 demonstrates how many different types of methodologies can be used in a single project on gender and climate change.

Box 1 Project example

Example of how many different approaches are used in one individual project

Heinrich Böll Foundation African Regional Gender Project

A study in Mozambique on gender and climate (Ribeiro and Chaúque, 2010) adopted the Gender Analysis Matrix (GAM) approach to help determine different impacts of climate change on women and men, by providing a community-based technique for identifying and analysing gender differences. They also used a *climate change impact assessment* to help identify the possible impacts of climate change on women and men in the community. They applied an analysis of *influencing factors* to decide what determines the differences identified in the gender division of labour and with regards to access to and control over resources. They further applied an *institutional analysis* to look at how institutions behave and function according to informal rules-in-use and norms and formal rules and law. They carried out *access and control and social profiles* to answer the question 'Who has access to and control of knowledge, resources, services and decision-making and what kind of relationships exist that create and reproduce differences between women and men?' Then they used *capacity and vulnerability analysis* to identify what will help (capacity) and what will hinder (vulnerability) the adaptation to climate change. Finally, a *needs assessment* provided a method of assessing the practical needs and the interests of women and men that must be addressed.⁸

⁸ Adapted from Schipper et al, 2010

4. Methodologies

There are numerous toolkits to help integrate gender into climate change or development projects; indeed it seems as if every non- and inter-governmental organisation (IGO) is required to produce one. Partly this is to guide their own staff, and partly to demonstrate that they are thinking about gender. They are typically free of charge, available to download from the Internet, and emphasise user-friendliness. The challenge, as noted above, is that their effectiveness is uncertain. Although feedback on user experiences is invited, it is not publicly available (if it is even made). The toolkits themselves do not usually indicate whether they have been applied. Toolkits are also often just a collection of methodologies that are explained and provided as a suggestion; the methodologies themselves are not typically new or particular to the issue of gender, climate change and development (see Box 1). It is often the combination and order that make the toolkits unique. Box 3 lists numerous toolkits, guidebooks, guidelines and frameworks that are relevant for this study but it is just a selection, since there are too many to list here.

There are several toolkits that have been produced as guides to gender and development. With the recognition of the importance of gender in relation to climate change, there are also an increasing number discussing methodologies related to climate change and gender written by various leading multilateral institutions, such as the World Bank, CGIAR (a global partnership of organizations engaged in research for food security), through to non-governmental organisations (NGOs) such as CARE International, which provide guidance on participatory methods to integrate gender into projects. These focus on, among other things, gender equity and equality, women's empowerment, gender mainstreaming and gender transformative approaches. Each toolkit identifies methodologies for integrating gender into projects and programmes; however they do not necessarily recommend the same techniques or initiatives and approach gender integration through different lenses. Without an agreed or dominating methodology for how to integrate gender into projects, the literature indicates that methodologies for integrating gender are implemented through different lenses, namely through a human rights lens, a resilience lens or a sustainable livelihood lens.

Examining gender incorporation into disaster risk management, Ferris et al. (2013) identify the need for a **rights-based approach** at all levels of governance, and this lens is one utilised by several NGOs who advocate for the integration of gender into climate change. Viewing gender through a human rights lens places emphasis on the need to address unequal social and power relations, and explicitly focuses on achieving 'the minimum conditions for living with dignity' (Jost et al., 2014). For example, the literature states that CARE International's approach is to achieve a just, gender-equitable and sustainable future beyond 2015 (Otzelberger and Harmeling, 2014). CARE highlights the key role of gender inequalities in unfair power relationships, linking this to inequalities in the distribution of resources, power and in the fulfilment of rights which are at the root of poverty and vulnerability to climate change (Otzelberger and Harmeling, 2014). Drawing on CARE's approach and as Skinner (2011) identifies, CARE's gender sensitive methodology includes measures that seek to take gender inequalities into account in light of climate change, and gender-transformative activities are based on several measures, including; gender-sensitive analysis of vulnerability to climate change, recognising differential vulnerability within countries, aim to empower vulnerable women and girls to build their adaptive capacity, and supports men and women to access the resources, rights and opportunities they need to adapt to their changing environment. Examples are highlighted, including in Tajikistan where CARE worked alongside men and women to design a simple technology to help people adapt to

shifting seasons and changing climate, increasing women's agency through promoting food preservation and increased household production (CARE, 2010).

A **livelihoods perspective** focuses on understanding how people access and control resources and activities, and how these differ within and among households in ways that determine how they achieve important outcomes in their lives (Jost et al., 2014). Whilst critiques indicate that this approach could be prone to a gender blind approach, and consequently obscure gender (GROOTS, 2011), a fully gendered approach could be used to identify differences in adaptive capacity between different groups between men and women, and ensure that adaptation strategies work towards ensuring that vulnerable people have equal access to resources, rights and opportunities (Jost et al., 2014).

A **resilience perspective** highlights the need to understand social norms and social factors that maintain gendered power inequalities, and reduce the ability of women and girls', and men and boys' ability to reduce their vulnerability to environmental shocks and stresses. Empowerment, and the need to create an enabling environment, is critical to enhance resilience, and is becoming more widely integrated in projects, and in resilience focused toolkits, such as the 'Leading Resilient Development: Grassroots Women's Priorities, Practices and Innovations' (GROOTS, 2011). However, shortfalls regarding the definition used throughout toolkits, misunderstanding of the concept and subsequent implementation of projects that do not facilitate transformation have the potential to hinder gender integration within resilience focused projects or toolkits.

Socio-economic and gender analysis (SAEGE) is identified by CGIAR as a useful framework for integrating gender issues into climate change, particularly within agriculture and food security sectors. Using three key Participatory Rural Appraisal (PRA) tools of context analysis, stakeholder analysis and livelihood analysis, SAEGE analyses social dynamics that may impacts and shape how different households and community members may experience and respond to climate change, ensuring that men and women are engaged in the implementation of climate change solutions through a participatory approach (Jost et al., 2014).

Toolkits also identify frameworks that can usefully complement gender-analytical tools, and promote integrated development approaches. Approaches may also utilise a resource framework that includes wealth, resources and flow, including natural capital, social capital, human capital, manufactured capital and financial capital. The CGIAR toolkit (2014) highlights that the Five Capitals Model can complement gender-analytical tools, for example the SEAGA and CARE's WEF.

Box 2 Programme Example

The African Adaptation Programme (AAP)

Gender-sensitive programming is one of the specific components of the AAP, and participating countries have adopted a broad range of measures to integrate gender within their local context (Laddey et al., 2011). Varied measures are implemented through a focus on enhancing decision-making power, participation, improving access to climate information and education and expanding women's financing options. For example, in Nigeria, the implementation of a skills development programme for the analysis of climate impacts and policy, regulatory and financing issues involves educating women on international climate change negotiations and developing women's leadership skills in important institutions, such as the Ministry of Women's Affairs, state and local governments and in civil societies. In Cameroon, the programme explicitly focuses on women's groups at the local and the regional levels whilst in Lesotho, wind and solar energy projects aim to incorporate gender-sensitive planning and programming.

5. Limitations

Some mention of limitations within the methodologies that are utilised to integrate gender can be found in reviewing them and looking at critiques in the literature. One somewhat obvious limitation is that gender typically translates to a focus on women. Whilst many of the projects discuss gender equity, and gender-sensitive approaches, the approaches taken to implementing gender mainstreaming often solely address women's needs and issues, leaving an overriding absence of men-focused discussion. This creates problems, given that women are part of families and society and not isolated from them (Demetriades and Esplen, 2008). What is lost in a women-only focus is the fact that women and men (girls and boys) experience climate change in different ways. Consequently, while a woman sees that there is less to eat, a man will see that the fields are less productive and a child will be affected by having less nutrition. This differential aspect is arguably as important as the understanding that women are more severely affected. As a result, men may not understand what women are going through, while women-only studies ignore what is happening to men. Since little or nothing is known about men (and children or older people), this then prevents action from being formulated for their benefit as well.

There is also a widespread acknowledgement of the number of inadequate studies that provide gender-disaggregated data. At national levels, the monitoring of National Progress Reports for the implementation of the Hyogo Framework for Action between 2011 and 2013 indicated that only 20 out of 100 countries reported conducting gender-disaggregated vulnerability and capacity assessments (Lovell and Le Masson, 2014), leaving a significant gap. Ferris et al. (2013) recognise the need to collect gender-disaggregated data on climate change which distinguishes between men and women, but also distinguish between intersecting social factors of age, ethnicity, socio-economic status and disability, which is the responsibility of governments and all organisations involved to collect. There is a need to inform assessments, programmes and projects alongside strategies, policies and monitoring and evaluation with gender disaggregated information is highlighted, and will be a 'critical starting point for implementing a systematic, gender-sensitive approach to risk management' (Ferris et al., 2013).

Box 3 Examples of Toolkits, Guides & Case Studies: Lessons and learnt and critical analysis

Toolkit Name	Relevant details for climate change and/or cities
ADB (2013) Toolkit on Gender Equality Results and Indicators	This toolkit discusses the need to explicitly address gender inequalities and outlines initiatives that should be implemented to achieve gender equality throughout development planning and programming. However, the toolkit lacks case studies, and where results and indicators are discussed, there is no clear indication as to where these have been derived from (fieldwork/desk based?), or whether they have been tested in practice.
CGIAR Gender and Inclusion Toolbox (2014): Participatory Research in Climate	It is evident that this toolkit also focuses strongly on women, focusing on identifying 'explicit objectives, strategies, targets, and actions to ensure women's equal participation and outcomes' to ensure the inclusion of women and girls. The objective of this Toolbox is to support programme designers and field practitioners in completing gender sensitive and socially inclusive research. The "Gender & Inclusion Toolbox: Participatory Research in Climate Change & Agriculture" was initially conceived as a revision of the 2012 CCAFS and FAO Training Guide, "Gender and Climate Change Research in Agriculture and Food Security for Rural Development". The FAO-CCAFS manual was a product of collaboration itself, having ten research tools tested in three regions in Bangladesh, Uganda and Kenya. The resulting papers produced a set of recommendations on

Change and Agriculture ⁹	improving use – which served as the foundation for the current Toolbox chapters. The current Toolbox builds from the strengths of the FAO-CCAFS manual, however has changed significantly as different actors co-designed the content through social learning processes conducted throughout 2013-2014.
Pacific Gender and Climate Change Toolkit, Tools for Practitioners ¹⁰	<p>This toolkit provides advice at a practical level, to address the application of knowledge regarding gender mainstreaming and climate change adaptation and mitigation. Principles and practices proposed in the toolkit are 'based on decades of experience in integrating a gender perspective in sustainable development, natural resources management and disaster preparedness'. The guide focuses on a series of modules covering: a) food security, climate change and gender, b) water climate change and gender, c) energy, climate change and gender, d) disaster risk reduction, climate change and gender and e) integrating gender as part of the climate risk mainstreaming process.</p> <p>From the case studies, the toolkit does display a strong focus on understanding the different roles of women and men, and highlights suitable indicators. Case studies highlight the improvement of water infrastructure in Tuvalu, discussing solar pump solutions in areas where water collection and accessibility was only considered to be completed by men, discarding the physical capabilities of children, women, the elderly and the disabled. In Kadavu, Fiji, both men and women are involved in a committee to manage community electricity, promoting joint decisions, and the integration of elderly and less educated women. The case studies also highlight the importance of considering the heterogeneous nature of women.</p> <p>The toolkit evidently builds on a strong understanding of local gender roles that has been developed at field level. However these case studies do indicate examples of where gender have been and should taken into consideration in the future, it does not state whether the toolkit has been utilised to guide the initiatives discussed in the case studies, or explicitly how the experiences, and lessons learnt from the decades of experience, have fed into the modules of the toolkit.</p>
FAO Training guide: Gender and Climate change Research in Agriculture and Food Security for Rural Development ¹¹	<p>The aim of this guide is to promote gender-responsive and socially-sensitive climate change research and development in the agriculture and food security sectors through participatory approaches, focusing on household and community levels. The guide is aimed at agricultural development professionals, and aims to specific support a gender-sensitive participatory process from analysing the current situation, and in planning for the future.</p> <p>The toolkit strongly promotes practitioners to consider the impact of climate change on both men and women, and demonstrates a strong understanding of gender mainstreaming within agricultural practice. The toolkit however does not discuss case studies of where the toolkit has been used, or of lessons built upon to formulate the toolkit.</p>
CARE International: Gender Equity and Building Blocks ¹²	<p>This is a second instalment of the gender toolkit, which outlines gender mainstreaming for water and sanitation actors within project cycle's and within institutions. CARE found that, when implementing their farmer support strategy, there was the need to better understand how gender relations impacted their household livelihood strategy (HLS). The toolkit aims to share some of the ways in which gender analysis is impacting on CARE's programming, and the toolkit identifies several of the methods that are can be used. This toolkit builds on experience from project implementation, and highlights a range of examples for integrating gender, and the need to consider the context of the situation for ensuring the most effective methods</p>

⁹ https://cgspace.cgiar.org/bitstream/handle/10568/45955/CCAFS_Gender_Toolbox.pdf?sequence=7

¹⁰ <http://www.solutionexchange-un.net/repository/pc/ccd/cr11-en-12102012.pdf>

¹¹ <http://www.fao.org/docrep/015/md280e/md280e00.pdf>

¹² http://www.careclimatechange.org/files/toolkit/Gender_equity.pdf

of gender mainstreaming. The most prominent are Participatory Learning and Action (PLA) Tools and Participatory Rural Appraisal (PRA) Tools.

UNISDR Making Disaster Risk Reduction Gender Sensitive (Policy and Practical Guidelines) ¹³	This publication provides an extensive list of policy guidelines on gender mainstreaming, and practical guidelines on how to institutionalise gender-sensitive risk assessments at national levels, including implementing gender-sensitive early warning systems, and using gender-sensitive indicators to monitor gender mainstreaming progress in line with the HFA and MDG's. The paper provides a summary of the limited global progress on gender integration, and provides a national framing for gender mainstreaming. However, due to the positioning of this paper, the context specific nature of gender mainstreaming at the regional or local level must not be overlooked.
OXFAM: Participatory capacity and vulnerability analysis: A practitioner's guide ¹⁴	No case studies used. This is a PCVA approach (participatory capacity and vulnerability analysis), which is a widespread method that has appeared in other toolkits.
Review of Climate Change Adaptation Practices in South Asia – Climate Concern ¹⁵	With many gender toolkits available, this toolkit captures the importance of learning from what has been done, particularly regarding gender mainstreaming as there are many toolkits available, but their validity, impact and evolution is questionable as they often lack narrative demonstrating good practices or lessons from which it has been built from, or from the conclusions it has been derived from: Review highlights: "While we are all still learning about adaptation, and its practice has still to mature, documenting and sharing lessons learned is especially important. This includes not only documenting the 'what', but also details of the 'how', to explain the process of working with communities and other stakeholders, the approaches, methodologies and relevant tools, and why these are important. This also includes details on the early successes and challenges of particular projects and programmes, given the need to learn both from what works and, just as vitally, from what does not."
IUCN, UNDP, GGCA (2009) Training Manual on Climate Change ¹⁶	The toolkit does use case studies, however it focuses on projects that have achieved the outcomes (e.g. empowerment, mainstreaming), although there is no mention of whether these projects are directly related to the techniques used in this manual, or whether the manual is merely highlighting cases where the outcomes have been achieved and have benefitted women, and so highlighting the need to use tools such as this training manual.
Gender, Climate Change and Community- Based	Whilst not providing examples, this toolkit does provide guidance on considerations that need to be taken into account in considering gender, derived from project implementation. The toolkit aims to focus on women as powerful agents of change, and to integrate gender from the beginning of project cycles. Projects, such as Kazakhstan, have inherent bias of project intervention areas, and thus special attention is needed to promote women's adaptation to climate change. Analysing community dynamics, and various power dynamics, is imperative to determine how to most effectively address gender issues, alongside accommodating women's traditional roles and responsibilities.

¹³ http://www.unisdr.org/files/9922_MakingDisasterRiskReductionGenderSe.pdf

¹⁴ <http://policy-practice.oxfam.org.uk/publications/participatory-capacity-and-vulnerability-analysis-a-practitioners-guide-232411>

¹⁵ <http://www.oxfam.org/sites/www.oxfam.org/files/rr-climate-change-adaptation-south-asia-161111-en.pdf>

¹⁶ http://cmsdata.iucn.org/downloads/training_of_gender_total.pdf

Adaptation (UNDP) ¹⁷	'Lessons learned from UNDP GEF CBA projects to date highlight the importance of analysing how gender plays a role in a community and then including gender concerns from the very beginning of a project, as this makes it much easier to follow through. It also emphasizes the importance of 'doing things differently 'to ensure that the implementation of the project is appropriate to the gendered roles and responsibilities of men and women. (p.46)
Community-based Risk Screening Tool – Adaptation and Livelihoods (CRiSTAL) ¹⁸	The CRiSTAL approach also provides a gender-specific vulnerability analysis for different parts of the population, highlighting coping strategies that are specific to women, and resulting in clear directions for how gender-specific measures will need to be incorporated into projects. ¹⁹

6. Case Studies: Lessons Learnt and Critical Analysis

Toolkit Name	Relevant Case Studies of Toolkits in Action
CARE International: Toolkit for integrating climate change adaptation into development projects ²⁰	<p>CARE LEAD Project: The LEAD project aims to improve the livelihoods of poor and marginalised women and men in Northern Ghana by supporting community-based agricultural extension systems. The case study reviews the application of the toolkit, and includes CRiSTAL analysis on proposed project activities (see above). The project focuses on three components: Sustainable and equitable community-based agricultural extension systems; duty bearers responsive to poor and marginalised people; and advocacy for sustainable, equitable and effective agriculture and natural resource policies.</p> <p>The CRiSTAL analysis identified the need strengthen the analysis of vulnerability, including through the integration of participatory analysis to validate generalisations about gender, land tenure and impacts of climate on livelihoods. Comprehensive, participatory and gender-sensitive analysis of vulnerability is needed if it is to be ensured that women and other marginalised groups will have access to services, and that strategies and technologies promoted by extension agents are appropriate to the specific needs of women and men or of other vulnerable groups. Using this approach also ensures that the rights and advocacy elements of the project effectively address issues of gender inequality and marginalisation, insecure access to and control over resources, and resolution of resource-based conflicts.</p> <p>CARE PASOS – III: The aim of this project is integrate adaptation into CARE's development programming, with the project becoming a case study for field testing. This project specifically acknowledges a cross-cutting theme of gender, knowledge management and risk reduction within components, including setting up Municipal Gender Units. However, the recommendations made did not seem to integrate</p>

¹⁷ [http://www.undp.org/content/dam/aplaws/publication/en/publications/environment-energy/www-ee-library/climate-change/gender-climate-change-and-community-based-adaptation-guidebook-/Gender%20Climate%20Change%20and%20Community%20Based%20Adaptation%20\(2\).pdf](http://www.undp.org/content/dam/aplaws/publication/en/publications/environment-energy/www-ee-library/climate-change/gender-climate-change-and-community-based-adaptation-guidebook-/Gender%20Climate%20Change%20and%20Community%20Based%20Adaptation%20(2).pdf)

¹⁸ <https://www.iisd.org/cristaltool/>

¹⁹ It has also been developed further into a CRiSTAL Food Security tool under a CDKN project: http://cdkn.org/project/climate-resilience-and-food-security-in-central-america/?preview=true&preview_id=17569&preview_nonce=6fb664c396

²⁰ http://www.careclimatechange.org/files/toolkit/CARE_Integration_Toolkit.pdf

gender mainstreaming into them explicitly, or at least gender mainstreaming, particularly within recommendation no. 1 which aimed to improve the analysis of vulnerability to future (long-term) climate change. Whilst the project clearly integrates gender components, gender must not become an add on as adaptation is integrated.

CARE SaWa: CARE Kenya is currently implementing a project aiming to ensure school children have access to safe water as part of the Global Water Initiative. In combination with a CVCA approach, gender mainstreaming has been integrated, with a focus on training men and women in gender and development, but by also acknowledging that gender women have been generally marginalised due to strong cultural, religious and traditional beliefs and practices of the community. As a result, one of the recommendations for moving forward is to strengthen the analysis of gender and economic dimensions of vulnerability, including people living with HIV/AIDs, the elderly, and children, although the identification of vulnerable groups was not directly informed by communities, highlighting increasing recognition of the need to address gender in alignment with cross-cultural aspects

CARE Climate
Vulnerability and
Capacity
Analysis
Handbook²¹

Relevant Case Studies:

Climate Vulnerability and Capacity Analysis Report from southern Thailand²²: Using the CVCA approach, it is evident that within their climate vulnerability and capacity analysis of the South of Thailand, CARE recognise the need to ensure that the different roles and responsibilities of men and women are considered in enhancing vulnerability, with a particular focus on women, the impact of increased workloads, and the need to increase access to information and data, particularly with cross cutting age disaggregated data. Whilst this report is strong in recommending actions to move forward in enhancing climate and disaster-resilient livelihoods, gender mainstreaming is not explicitly addressed within this specific study, and it would be interesting to see how gender plays a role in the identified vulnerable groups, such as 'fishermen, farmers, elderly and children'.

Adaptation Learning Programme (ALP): Climate Change Vulnerability and Adaptive Capacity in Garissa County, Kenya²³

In exploring the Adaptation Learning Program for Africa (ALP), it is evident that CARE disseminates good practices and lessons that have been learnt from case studies. Gender is one of the core components of working to increase the capacity of vulnerable households to adapt to climate change. CARE recognises that adaptive capacity is shaped by gender and the need to understand the different roles and challenges faced by women and men in securing their livelihoods and adapting to climate change. ALP's analysis focuses on exposing gender-related issues that influence adaptive capacity, creating a foundation for Community-Based Adaptation planning that promotes gender equality and women's empowerment. The case study indicated that gender inequality hindered women through mobility and choice, whilst marginalisation of women reduced the possibility of sustainable household and community resilience, and initiatives must therefore address social marginalisation and social inequality.

IFRC: A practical
guide to gender-
sensitive
approaches for
disaster
management²⁴

National Societies address gender-sensitivity and diversity within their disaster management actions across Asia Pacific. Project descriptions highlight how methods have been used to reached the below conclusions:

- Pakistan: Humanitarian Assistance for Internally Displaced Persons
- Myanmar: Women's Participation in Recovery
- Bangladesh: Community-Based Flood Management Programme

²¹ http://www.careclimatechange.org/cvca/CARE_CVCAHandbook.pdf

²² <http://www.care.org/sites/default/files/documents/CC-2013-THA-ThailandCVCA.pdf>

²³ http://www.gender-climate.org/Content/Docs/Publications/CARE_CVCA_Kenya_Report_Final.pdf

²⁴ <http://www.ifrc.org/PageFiles/96532/A%20Guide%20for%20Gender-sensitive%20approach%20to%20DM.pdf>

- China: Community-Based Preparedness
- Indonesia: Integrated Community-Based Risk Reduction Project
- Solomon Islands: Working Together for Healthy Communities

Brief Summary:

In Pakistan, there is the need to enhance the understanding of the long-term impact of gender inclusiveness and improve future planning and designs. Action plans, across different levels, are essential for developing gender equality action plans at the departmental and organisations levels.

In Myanmar, future lessons did indicate that there is the need for structured and gender-sensitive approaches to address their special needs. Future challenges identified are the need to ensure the participation of women, with participation targets for women falling below expected.

In Bangladesh, community-based flood management highlighted the importance of cultural and religious leaders in encouraging and acceptance of women, as well as bringing the impact of projects on women and males roles to a fore. Discussions highlighting the potential tension between men and women when considering the new volunteering roles of young female volunteers, who of the marriage age of women, and the potential impact on household roles raises concerns as to the impact of resilience and DRR projects on productivity and extra responsibility. This project however also has a prime focus on enhancing women volunteering and participation.

In China, there was a key focus on women, primarily driving empowerment and leadership. However, ensuring that respected community leaders and members are involved in gender sensitive education and training, including follow-up support and practical advice, is critical. As the review identifies, gender is a relatively new concept in China in general, and more good examples and concrete case studies are needed as guidance, particularly considering the limited information available in Chinese.

In Indonesia, reports indicate that the projects have started to integrate gender issues, and consultations with both male and female beneficiaries are reportedly significantly improving the ability of projects to address needs and concerns of male and female community members. Gender sensitive approaches have increased the overall level of community safety, as evacuation routes, contingency plans and physical mitigation activities are more accessible and user-friendly for women and children than they would have been otherwise. Integrating gender into initial design phases, generating relevant tools, and continuing to educate, integrated and adapt best practices to include gender are key.

OXFAM: Gender, Disaster Risk Reduction and Climate Change adaptation: A learning Companion. Oxfam Disaster Risk Reduction and Climate Change Adaptation Resources²⁵

Example of projects where focus has been placed on enhancing the role and inclusion of women within Disaster Preparedness and DRR schemes are highlighted:

- Disaster preparedness and early-warning systems for floods, landslides, and earthquakes in Tajikistan
- Lobbying for the inclusion of gender concerns in Pakistan’s National Disaster Risk Management Framework
- Women adapting livelihood strategies in response to unpredictable rainfall in Uganda.

Oxfam implements gender mainstreaming in practice and projects, and conducts gender analysis during risk, vulnerability and capacity analysis to ensure gender-sensitive Disaster Risk Reduction. In Tajikistan, women were actively involved in preparing the community for future hazards, and in planning rescue responses, resulting in enhanced public awareness and education. In Pakistan, Oxfam worked closely with the National Disaster Management Authority (NDMA) to ensure that

²⁵ <https://www.gdnonline.org/resources/OxfamGender&ARR.pdf>

the National Disaster Risk Management Framework reflected gender concerns, which had not been factored in before, ensuring that there was a focus on the children, and the elderly. A draft protocol of responsibilities was drawn up for the Ministry for Women and Development, including: raising awareness among women of disaster risks; developing the capacities of women's organisations in disaster risk management, and supporting the rehabilitation of women's livelihoods, particularly those working in the unregulated informal sector. In Uganda, a reduction in trees, and subsequent firewood, lead to initiatives for both genders to reduce travelling times, and to ease livelihoods through planting trees and building a borehole. This has given women an important role in finding sustainable livelihoods solutions in the community. However, it is evident that the clear focus is on women, rather than on men and women.

7. Knowledge gaps

This section outlines some knowledge gaps in the literature. As noted, one of the challenges faced by this review was to identify literature that talked about experiences with **gender-sensitive projects in both climate change and urban contexts**. Due to the limited information itself, and based on a review of the available literature on gender and cities and gender and climate change, some questions emerge. What could be some of the differences between looking at gender and climate change in a rural context (the most common) and in an urban context? What are the differences between men and women in rural and urban settings? The most significant differences will most likely have to do with livelihood activities and access to education and healthcare. In rural areas, men and women's roles may be more traditional – the majority of agricultural activities are done by the men, while women do all domestic tasks, and assist with agricultural activities seasonally, such as picking crops, weeding, or taking care of small livestock. Even at a young age, this gender difference is clear, as boys may take out grazing livestock and girls may be tasked with fetching water. In an urban setting, there may not be such a difference between the way in which income-generating activities affect men and women in a changing climate. There may also be less of a discrepancy between men and women in urban areas when it comes to education and healthcare.

Similar to the methodologies, **much of the gender literature focuses on women**, because they are seen to be the most vulnerable due to gender inequalities, both past and present. Despite a call to make gender research about men and women as partners in communities and households, rather than only about women (Demetriades and Esplen, 2008), most literature and projects still tend to focus on women. Tacoli et al (2014) point out that most policies and practice focus on women's practical needs, rather than looking at broader gender relations and people's strategic interests (Moser and Levy, 1986). This may result in increasing burdens for women without necessarily creating corresponding rewards (Arora-Jonson, 2011) and, in the worst case, further exaggerating gender inequalities. One of the challenges is that there is an assumption in much of the literature that the weakest people are the most vulnerable to climate change, as noted also by Demetriades and Esplen in 2008, and still holding true. That women are seen as the most vulnerable is implicit, even though there is sufficient evidence in case studies to show that women can be more creative and more flexible than men because of the need to adjust to a male-dominated society²⁶ (IFAD, 2014). This also relates to

²⁶ 'Given their responsibilities to manage critical household's assets and as steward of natural resources, women are potential agents of change. Essential to draw on the local knowledge of female as well as male smallholders to develop adaptation strategies for families and communities to cope with climate change' (IFAD, 2014).

Alston's point (2013b) that a new conceptual framework is needed for adaptation research to address people who are extremely vulnerable to climate change.

There is also a need for studies to be more nuanced. Ajibade et al (2013) showed that there are differences between low-, middle- and high-income women experiencing flash floods in Lagos, Nigeria. They underscore the need for greater social differentiation, in addition to gender disaggregation, in order to provide a better understanding of the specific needs and capabilities of different groups of men and women (Ajibade et al, 2013).

A focus on the way in which **climate change affects social relations** is suggested by the literature (eg. Sultana, 2014), but appears to intimidate project teams because it requires dealing with numerous, deep, underlying societal and cultural issues. Practitioners often prefer not to challenge existing and deeply rooted social and cultural norms, and prefer to do avoid doing any harm (ODI report on Gender mainstreaming in WASH projects, forthcoming). Yet looking through a social relations lens could be a useful approach when departing from rural areas, which has otherwise been the source of most of the knowledge about gender and climate change. Thinking about culture is still lagging in most climate change projects (eg Cannon et al, 2014), and as such the cultural issues around gender are not at the forefront. Indeed, while gender roles are both social and cultural, it needs to be recognised that the different cultural contexts mean that integrating gender into projects will require different levels of effort and creativity, and in some cases be extremely challenging. This is problematic when we consider that gender never stands alone; it is always mediated by multiple intersection between gender, class, ethnicity, age, and other power relations (Yuval-Davis, 1997). What matters is not only if you are a man or a woman, but which man or woman you are in relation to other social and environmental categories that are relevant in each instant. Hence, 'intersectionality' analysis is necessary to identify gendered spheres of influence, perceptions and actions across environmental, social and economic dimensions.

8. Revision of research questions

The review examines the huge problem of gender inequality and the consequent implications this has for differences in men and women's vulnerability to climate change. We have noted that there are multiple unanswered questions and limited literature on this topic in urban areas, since most knowledge has been generated by studies in rural areas. The original research questions drafted for this project, are still relevant and can be expanded with sub-questions, including with questions on urban and rural differences.

1. What is the evidence of the relevance of gender-sensitive programming in CCD to promote and achieve people's empowerment?

This question is not specific to urban areas, and this review has indicated that there is extremely limited evidence of how effective gender-sensitive programming has been. This question remains extremely important. It could also address the following sub-questions:

- How is knowledge about the differential nature of vulnerability to climate change being applied in practice?
 - To what extent is the need for deep societal transformation with respect to gender roles, women's rights, etc. recognised by the project? And how is it taken into account?
-

- How does gender-sensitive programming differ in urban and rural areas?
- To what extent are climate change projects that seek to integrate gender taking gender expertise into account? What are the sources that are being drawn on to inform project design? And, crucially, to what extent are the recommendations from gender and development literature being considered?

2. What socio-economic, political and cultural factors constrain or favour gender-sensitive approaches in the context of CCD?

Sub-questions could include:

- At what level should gender, climate change and development be addressed? Who is responsible for taking this on?
- Can findings and theories about gender and climate change rooted primarily in studies in rural areas be applicable in urban areas as well? What differences can be found in rural and urban areas with respect to how gender intersects with climate change?
- Are there 'hidden agendas' behind the approaches taken or not taken by UN agencies, NGOs or other groups?

3. Does a gender sensitive approach enable better climate compatible development outcomes and if so, in what way?

This question refers to outcomes, and because the literature is hardly able to address this, it will be necessary to carry out extensive interviews with project staff who have already completed projects and are willing to be open about the experience (see Section 6). Sub-questions could include:

- Do the findings regarding women and men and their distinct experiences and perceptions of climate change get translated into policy, institutions and projects?
- What concrete compensatory/corrective measures have been adopted and/or institutionalised to respond to women's frequently greater vulnerability? At what level/scale (local to national), and at which scales do the drivers appear to be influencing these developments?
- Do women have inherent adaptive capacity that men do not possess? And if so, should projects consider this in their design?

9. Case study criteria

One of the purposes of this review, as stated in the introduction, is to help identify case studies for the project. Because of the challenge in identifying projects that focus on gender in urban areas in the context of climate change in developing countries, this section instead outlines possible criteria for case study selection. Based on the above, four suggested criteria for case study selection emerge. They are basic, but important.

Criteria	Excludes	Includes
Projects should have been recently completed or on-going for long enough that staff involved are fully integrated and familiar with the project.	Projects that have not yet begun and that are in early phases (first 5-10% of total project time). Projects where staff are new and/or institutional memory is limited.	Projects that are still on-going, even if final results have not yet been published, but interviews and field visits should be able to extract sufficient information to fulfil goals of our project.
Projects should be in urban or in peri-urban areas.	Areas that do not have any urban characteristics, but are still categorised by governments as 'peri-urban'	Areas that are not necessarily part of the city but are urban.
The approach to integrating gender into the project should be documented and/or part of a strategy.	Projects that have found only later that gender is a key component.	Projects that have explicitly set out to incorporate or focus on gender.
Project leaders and members must be open to having the project critiqued.	Projects where teams are uncomfortable with critique, since interview responses are likely to be biased and/or there could be bad relations built with project organisations.	Projects where teams are willing to reflect on the design and execution of the project with an open mind, and are aware that we may be critical of the project and its management.

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